Step-by-Step Guide

to

Open-E DSS V7 Active-Active iSCSI Failover

Software Version: DSS ver. 7.00 up01

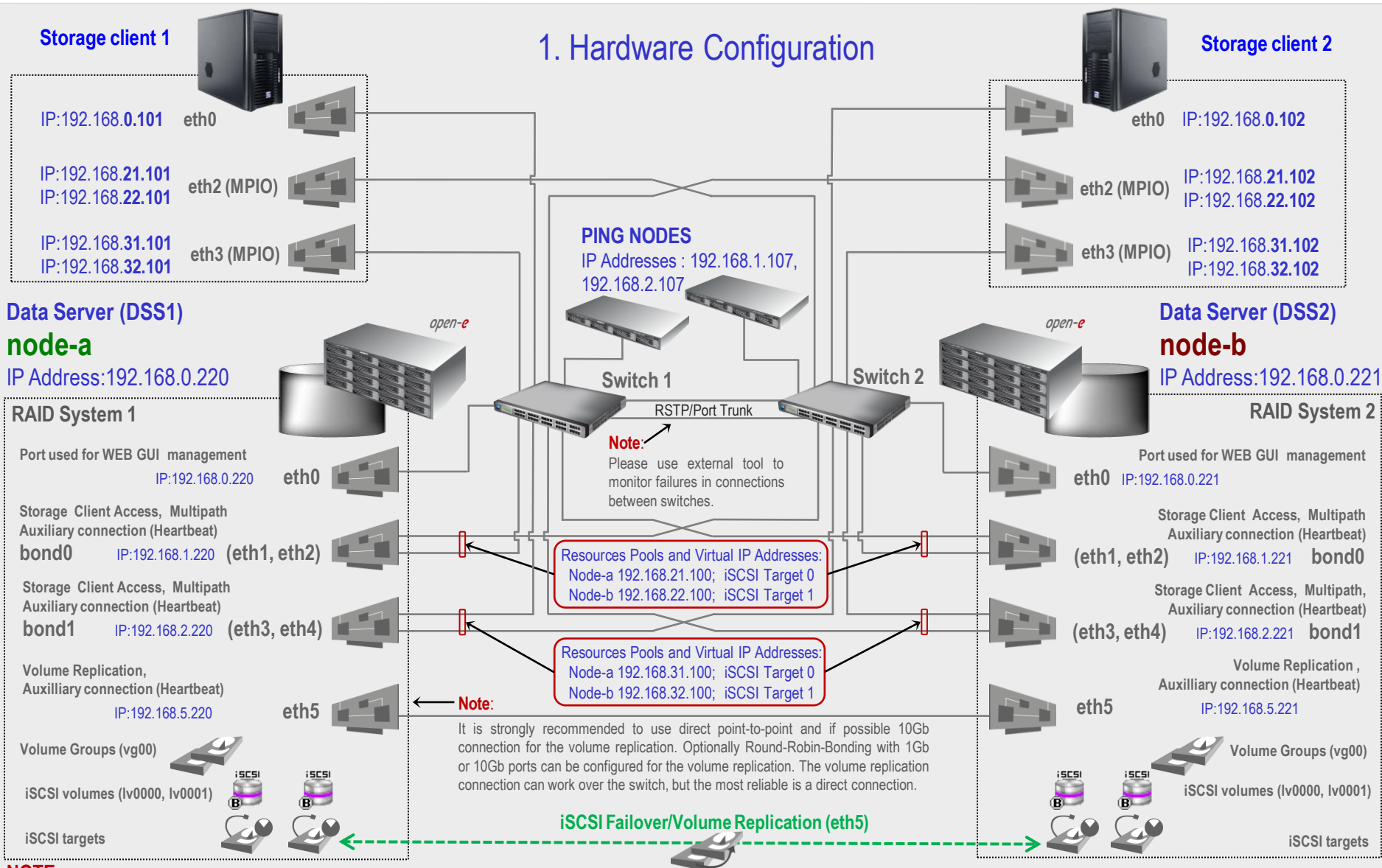Presentation updated: September 2012

TO SET UP ACTIVE-ACTIVE iSCSI FAILOVER, PERFORM THE FOLLOWING STEPS:

1. Hardware configuration:

2. Network Configuration

   • Set server hostnames and ethernet ports on both nodes (node-a, node-b)

3. Configure the node-b:

   • Create a Volume Group, iSCSI Volume

   • Configure Volume Replication mode (destination and source mode) – define remote mode of binding , create Volume Replication task and start the replication task

4. Configure the node-a

   • Create a Volume Group, iSCSI Volume

   • Configure Volume Replication mode (source and destination mode), create Volume Replication task and start the replication task.

5. Create targets (node-a and node-b)

6. Configure Failover (node-a and node-b)

7. Start Failover Service

8. Test Failover Function

9. Run Failback Function

Open-E DSS V7 Active-Active iSCSI Failover

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1. Hardware Configuration

Storage client 1

IP:192.168.**0.101**   eth0

IP:192.168.**21.101**
IP:192.168.**22.101**   eth2 (MPIO)

IP:192.168.**31.101**
IP:192.168.**32.101**   eth3 (MPIO)

Storage client 2

eth0   IP:192.168.**0.102**

eth2 (MPIO)   IP:192.168.**21.102**
IP:192.168.**22.102**

eth3 (MPIO)   IP:192.168.**31.102**
IP:192.168.**32.102**

PING NODES
IP Addresses : 192.168.1.107,
192.168.2.107

Data Server (DSS1)
node-a
IP Address:192.168.0.220

Data Server (DSS2)
node-b
IP Address:192.168.0.221

Switch 1   Switch 2

RSTP/Port Trunk

RAID System 1

Port used for WEB GUI management
IP:192.168.0.220   eth0

Storage Client Access, Multipath
Auxiliary connection (Heartbeat)
bond0   IP:192.168.1.220   **(eth1, eth2)**

Storage Client Access, Multipath
Auxiliary connection (Heartbeat)
bond1   IP:192.168.2.220   **(eth3, eth4)**

Volume Replication,
Auxilliary connection (Heartbeat)
IP:192.168.5.220   eth5

Volume Groups (vg00)

iSCSI volumes (lv0000, lv0001)

iSCSI targets

RAID System 2

Port used for WEB GUI management
eth0   IP:192.168.0.221

Storage Client Access, Multipath
Auxiliary connection (Heartbeat)
(eth1, eth2)   IP:192.168.1.221   **bond0**

Storage Client Access, Multipath
Auxiliary connection (Heartbeat)
(eth3, eth4)   IP:192.168.2.221   **bond1**

Volume Replication ,
Auxilliary connection (Heartbeat)
eth5   IP:192.168.5.221

Volume Groups (vg00)

iSCSI volumes (lv0000, lv0001)

iSCSI targets

Note:
Please use external tool to monitor failures in connections between switches.

Resources Pools and Virtual IP Addresses:
Node-a 192.168.21.100; iSCSI Target 0
Node-b 192.168.22.100; iSCSI Target 1

Resources Pools and Virtual IP Addresses:
Node-a 192.168.31.100; iSCSI Target 0
Node-b 192.168.32.100; iSCSI Target 1

Note:
It is strongly recommended to use direct point-to-point and if possible 10Gb connection for the volume replication. Optionally Round-Robin-Bonding with 1Gb or 10Gb ports can be configured for the volume replication. The volume replication connection can work over the switch, but the most reliable is a direct connection.

iSCSI Failover/Volume Replication (eth5)

NOTE:
To prevent switching loops, it's recommended to use RSTP (802.1w) or Port Trunking on network switches used to build A-A Failover network topology.

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

2. Network Configuration

After logging on to the Open-E DSS V7 (node-b), please go to **SETUP** and choose the „**Network interfaces**" option.

In the **Hostname** box, replace the "dss" letters in front of the numbers with „node-b" server, in this example „**node-b-59979144**" and click the apply button (this will require a reboot).

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: Setup ▸ Network interfaces

Interfaces
- eth0
- eth1
- eth2
- eth3
- eth4
- eth5

Server name

Server name: dss2

Comment: Data Storage Software

apply

Hostname

Hostname: node-b-59979144

apply

Please apply changes or press "reload" button to discard

DNS settings

DNS: 194.204.152.34;194.204.159.1

apply

★ Event Viewer

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Data Server (DSS2)
node-b
IP Address:192.168.0.221
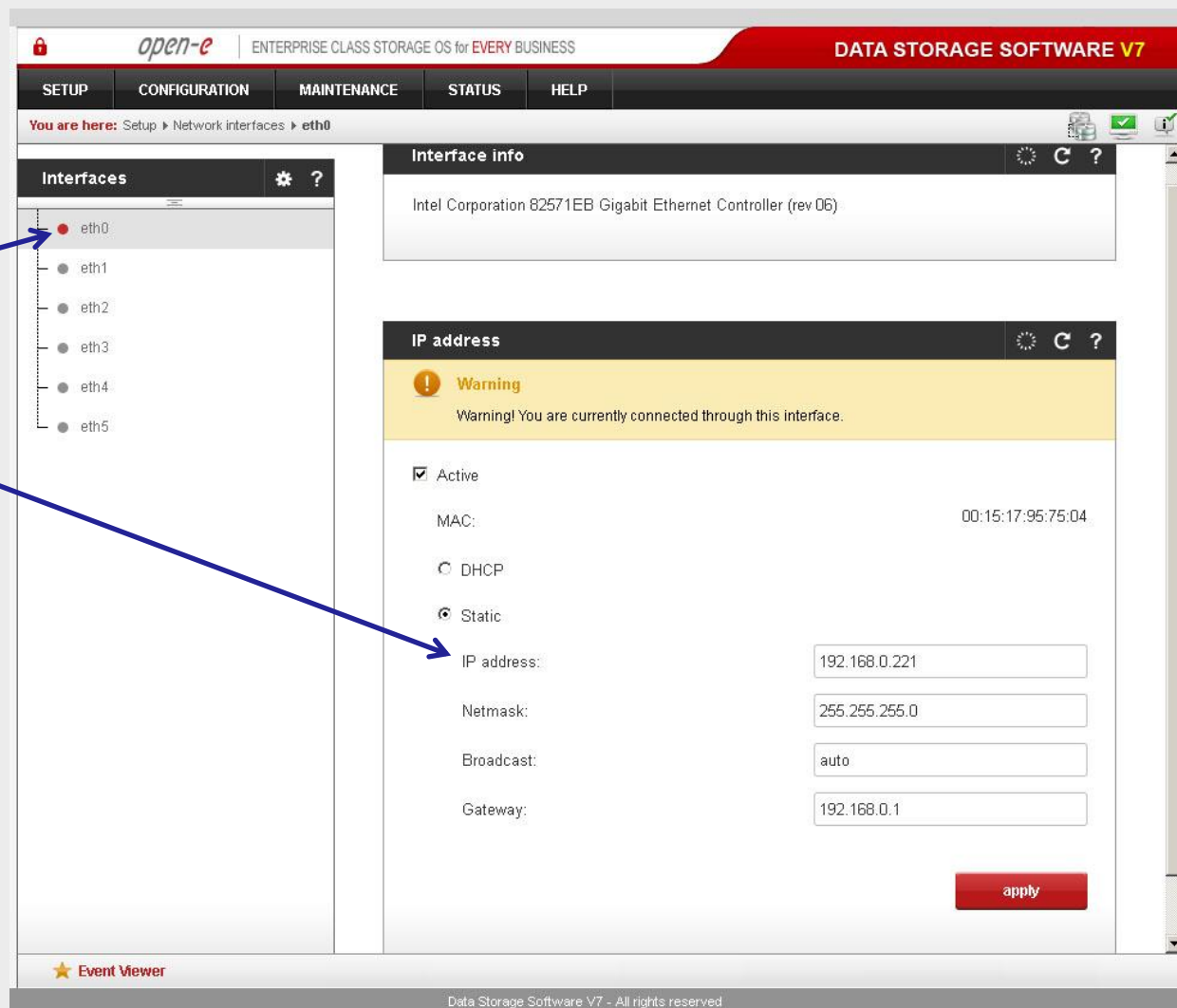
2. Network Configuration

Next, select **eth0** interface and in the **IP address field,** change the IP address from 192.168.0.220 to 192.168.0.221
Then click apply (this will restart network configuration).

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

2. Network Configuration

Once again, select **Interfaces** and in the „**Create new bond interface"** function check two boxes with **eth1** and **eth2**. Next, in the field **Create** select a bonding mode. In this example select **New balance-alb.**

Next, in the field **Adress IP** enter 192.168.1.221 and in the **Netmask** field enter 255.255.255.0 Afterwards, click the **create** button and confirm this action by clicking the **yes** button.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: Setup ▶ Network interfaces

Interfaces

- eth0
- eth1
- eth2
- eth3
- eth4
- eth5

Create new bond interface

Select	Primary	Interface	Active	Cable	Available	
☐	☐	eth0	yes	cable	yes	⌄
☑	☐	eth1	yes	cable	yes	⌄
☑	☐	eth2	yes	cable	yes	⌄
☐	☐	eth3	yes	cable	yes	⌄
☐	☐	eth4	yes	cable	yes	⌄
☐	☐	eth5	yes	cable	yes	⌄

Create: | New balance-alb
MAC: | 02:38:22:48:C2:69
○ DHCP
◉ Static
Address IP: | 192.168.1.221
Netmask: | 255.255.255.0
Broadcast: |
Gateway: |

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

2. Network Configuration

Again, in the „**Create new bond interface"** function check two boxes with **eth3** and **eth4**. Next, in the field **Create** select a bonding mode. In this example select **New balance-alb.**

Next, in the field **Adress IP** enter 192.168.2.221 and in the **Netmask** field enter 255.255.255.0 Afterwards, click the **create** button and confirm this action by clicking the **yes** button.

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

2. Network Configuration

Next, select **eth5** interface and in the **IP address field,** change the IP address from 192.168.5.220 to 192.168.5.221 and click the **apply** button.

Data Server (DSS1)
node-a
IP Address:192.168.0.220

2. Network Configuration

After logging in to node-a, please go to **SETUP** and choose the „**Network interfaces**" option.
In the **Hostname** box, replace the "dss" letters in front of the numbers with „node-a" server, in this example „**node-a-39166501**"and click apply (this will require a reboot).

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Data Server (DSS1)
node-a
IP Address:192.168.0.220
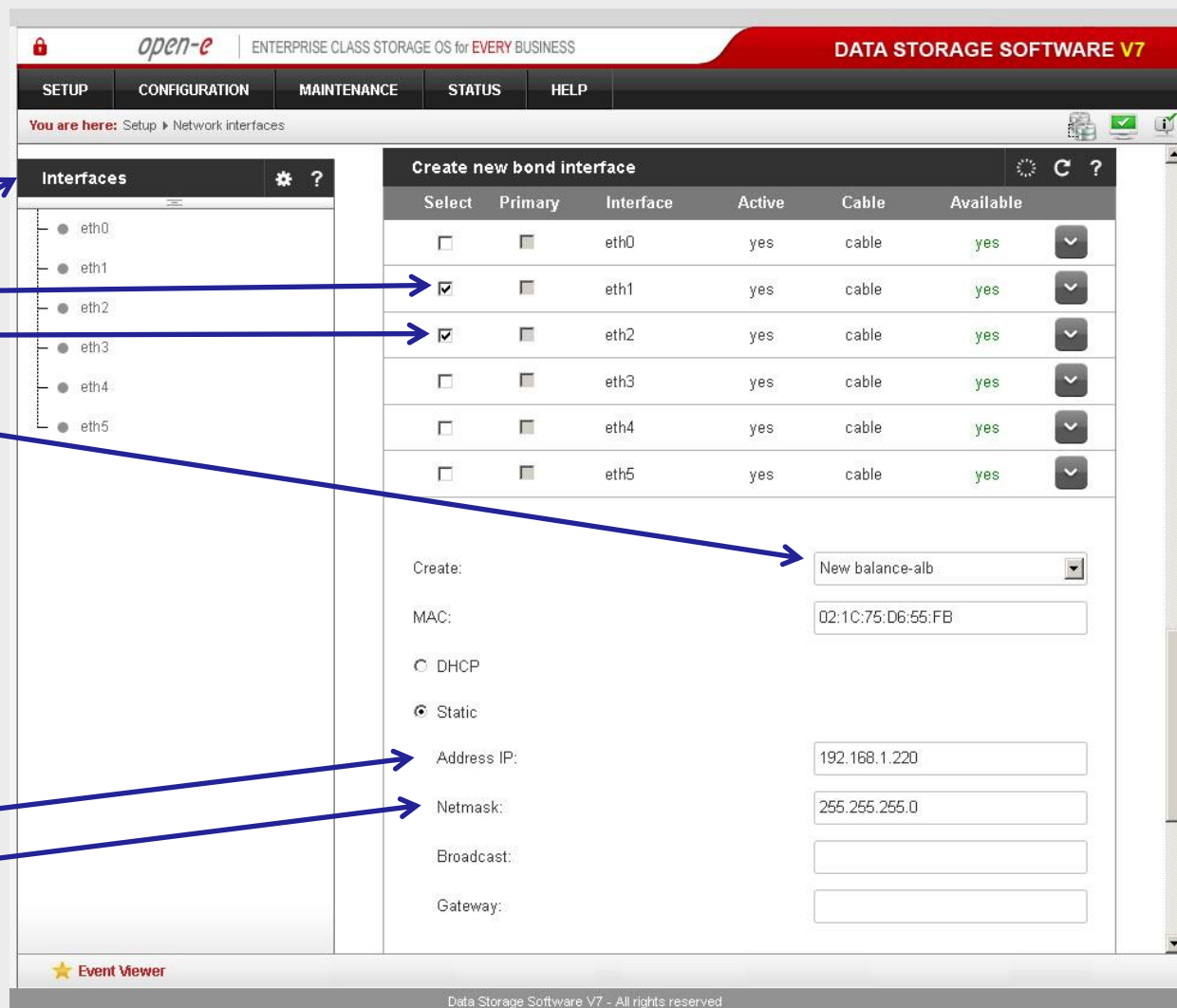
2. Network Configuration

Next, select **Interfaces** and in the „**Create new bond interface"** function check two boxes with **eth1** and **eth2**. Next, in the field **Create** select a bonding mode. In this example select **New balance-alb.**

In the field **Adress IP** enter 192.168.1.220 and in the **Netmask** field enter 255.255.255.0 Afterwards, click the **create** button and confirm this action by clicking the **yes** button.

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: Setup ▶ Network interfaces

Interfaces
- eth0
- eth1
- eth2
- eth3
- eth4
- eth5

Create new bond interface

Select	Primary	Interface	Active	Cable	Available	
☐	☐	eth0	yes	cable	yes	⌄
☑	☐	eth1	yes	cable	yes	⌄
☑	☐	eth2	yes	cable	yes	⌄
☐	☐	eth3	yes	cable	yes	⌄
☐	☐	eth4	yes	cable	yes	⌄
☐	☐	eth5	yes	cable	yes	⌄

Create: New balance-alb

MAC: 02:1C:75:D6:55:FB

○ DHCP

◉ Static

Address IP: 192.168.1.220

Netmask: 255.255.255.0

Broadcast:

Gateway:

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

2. Network Configuration

Again in the „**Create new bond interface"** function check two boxes with **eth3** and **eth4**. Next, in the field **Create** select a bonding mode. In this example select **New balance-alb.**

Next, in the field **Adress IP** enter 192.168.2.220 and in the **Netmask** field enter 255.255.255.0 Afterwards, click the **create** button and confirm this action by clicking the **yes** button.

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Under **CONFIGURATION**, select „Volume manager", then click on „Volume groups".

In the **Unit manager** function menu, add the selected physical units (**Unit MD0** or other) to create a new volume group (in this case, **vg00**) and click the **apply** button.

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Select the appropriate volume group (**vg00**) from the list on the left and create a **new iSCSI volume** of the required size.
Please set 2 logical volumes in the Active-Active option.
The 1st logical volume (**lv0000**) will be a destination of the replication process on node-b.

Next, check the box **Use volume replication.**

After assigning an appropriate amount of space for the iSCSI volume, click the **apply** button

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Next, create the 2nd logical volume on the node-b. Logical volume (**lv0001**) will be the source of the replication process on this node.

Next, check the box **Use volume replication.**

After assigning an appropriate amount of space for the iSCSI volume, click the **apply** button.

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

2 logical iSCSI Volume Block I/O are now configured.

iSCSI volume (lv0000) is set to destination

iSCSI volume (lv0001) is set to source

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

Under **CONFIGURATION**, select „**Volume manager**" and then click on „**Volume groups**".

Add the selected physical units (**Unit S001** or other) to create a new volume group (in this case, **vg00**) and click apply button.

Volume Groups (vg00)

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

Select the appropriate volume group (**vg00**) from the list on the left and create a **new iSCSI volume** of the required size.
Please set 2 logical volumes in the Active-Active option.
The 1st logical volume (**lv0000**) will be a source of the replication process on the node-a.

Next, check the box for „**Use volume replication"**

After assigning an appropriate amount of space to the iSCSI volume, click the **apply** button.

NOTE:
The source and destination volumes must be of identical size.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

Next, create the 2nd logical volume on the node-a. Logical volume (**lv0001**) will be a destination of the replication process on this node.

Next, check the box for „**Use volume replication"**.

After assigning an appropriate amount of space to the iSCSI volume, click the **apply** button.

NOTE:
The source and destination volumes must be of identical size.

Open-E DSS V7 Active-Active iSCSI Failover

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

2 logical iSCSI Volume Block I/O are now configured.

iSCSI volume (lv0000) is set to source

iSCSI volume (lv0001) is set to destination

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Now, on the node-b, go to „**Volume replication**". Within **Volume replication mode** function, check the **Destination** box for **lv0000** and check the **Source** box for **lv0001**. Then, click the apply button.

In the **Hosts binding** function, enter the IP address of node-a (in our example, this would be 192.168.5.220), enter node-a administrator password and click the apply button.

NOTE:
The remote node IP Address must be on the same subnet in order for the replication to communicate. VPN connections can work providing you are not using a NAT. Please follow example:
- node-a: 192.168.5.220
- node-b: 192.168.5.221

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SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP

You are here: Configuration ▶ Volume manager ▶ Volume replication

Vol. groups

○ vg00

Volume replication mode

Logical Volume	Init	Source	Destination	Clear metadata
lv0000	done	☐	☑	☐
lv0001	done	☑	☐	☐

apply

Please apply changes or press "reload" button to discard

Vol. replication

Hosts binding

Define remote node

Remote node IP address: 192.168.5.220

Remote node GUI (administrator) password: •••••

connect

Create new volume replication task

ℹ Info

Volume replication tasks can not be created because there is no remote node connected.

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

Next, on the node-a, go to „**Volume replication**".
Within **Volume replication mode** function, check the **Source** box for **lv0000** and check the **Destination** box for **lv0001**.
Next, click the apply button.

Data Server (DSS1)
node-a
IP Address:192.168.0.220
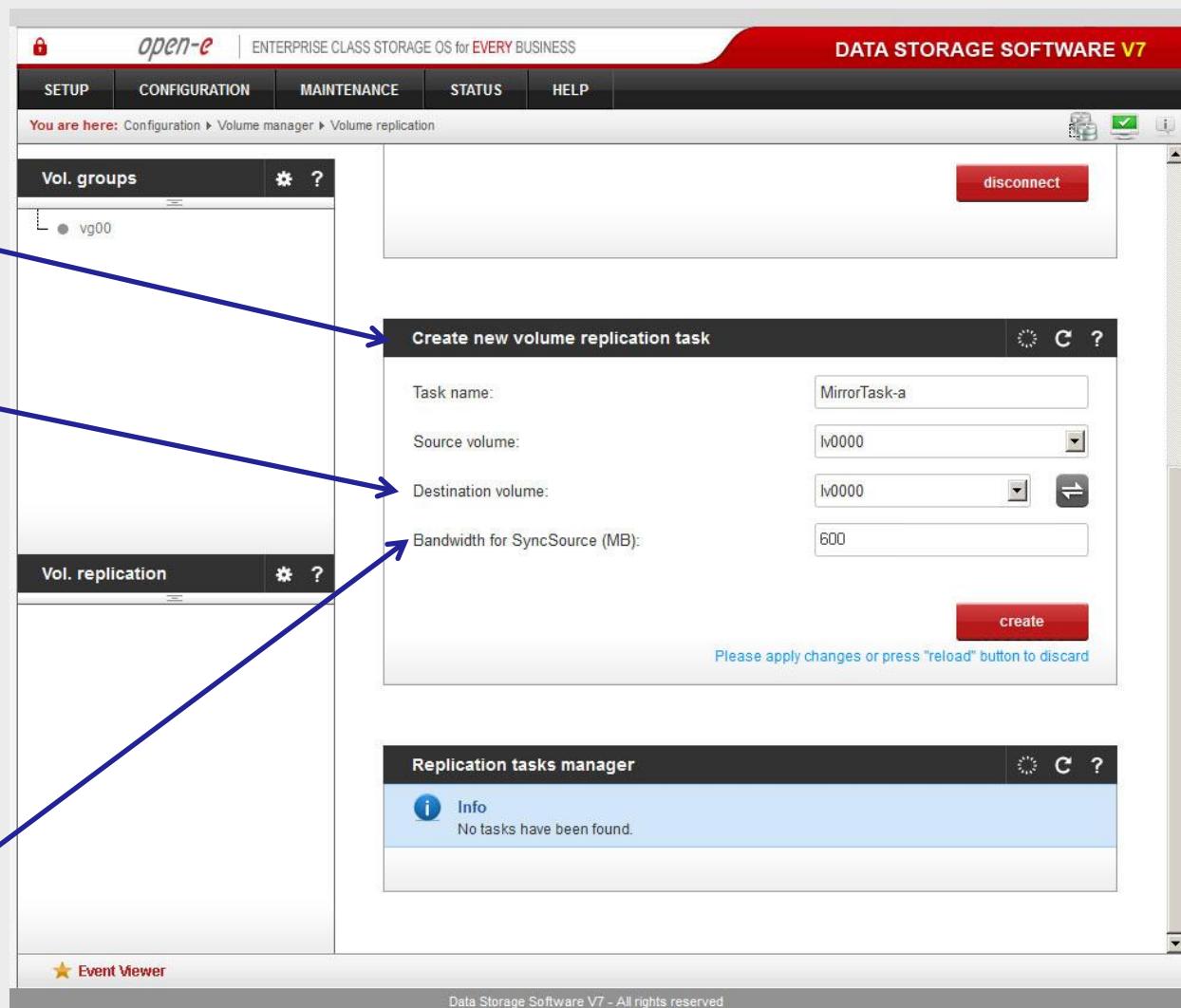
4. Configure the node-a

In the **Create new volume replication task**, enter the task name in the **Task name** field, then click on the ⇌ button.
In the **Destination volume** field, select the appropriate volume (in this example, **lv0000**).

In case of a 10GbE connection it is recommended to set for the replication a higher **Bandwidth for SyncSource (MB)**. To achieve better performance you can set 500MB. In the example, maximum 600MB is used. Next, click the **create** button.

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

Now, in the **Replication task manager** function, click the corresponding „play" button to start the Replication task on the node-a.

Open-E DSS V7 Active-Active iSCSI Failover

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

In the **Replication tasks manager** function, information is available on currently running replication tasks. When a task is started, a date and time will appear.

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

4. Configure the node-a

You can check the status of Volume Replication anytime in **STATUS** -> „**Tasks**" -> „**Volume Replication**" menu.

Click on the ⌄ button, located next to a task name (in this case **MirrorTask-a**) to display detailed information on the current replication task.

NOTE:
Please allow the replication task to complete (similar to above with status being „Consistent") before writing to the iSCSI Logical Volume.

Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

Next, go to the node-b.
Within **Create new volume replication task,** enter the task name in the **Task name** field, then click on the ⇌ button.
In the **Destination volume** field, select the appropriate volume (in this example, **lv0001**).

As in the node-a, in the **Bandwidth for SyncSource (MB)** field you must change the value of a minimum of 500 MB. In our example 600 MB is used. Next click the **create** button.

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

3. Configure the node-b

In the **Replication tasks manager** function, click the corresponding „**play**" button to start the Replication task on the node-b: **MirrorTask-b**.
In this box you can find information about currently running replication tasks.
When a task is started a date and time will appear.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS2)
node-b
IP Address:192.168.0.221

5. Create new target on the node-b

Choose **CONFIGURATION**, „iSCSI target manager" and „Targets" from the top menu.

In the **Create new target** function, uncheck the box **Target Default Name**.
In the **Name** field, enter a name for the new target and click **apply** to confirm.

iSCSI targets

NOTE:
Both systems must have the same Target name.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS2)
node-b
IP Address:192.168.0.221

5. Create new target on the node-b

Next, you must set the 2nd target. Within the **Create new target** function, uncheck the box **Target Default Name**.
In the **Name** field, enter a name for the 2nd new target and click **apply** to confirm.

iSCSI targets

NOTE:
Both systems must have the same Target name.

Data Server (DSS2)
node-b
IP Address:192.168.0.221

5. Create new target on the node-b

After that, select **target0** within the **Targets** field.

To assign appropriate volume to the target (**iqn.2012-09:mirror-0 -> lv0000**) and click the **+** button located under **Action.**

NOTE:
Volumes on both sides must have the same SCSI ID and LUN# for example: lv0000 SCSI ID on node-a = lv0000 on node-b.

WARNING:
Please do not switch on the write back (WB) cache !

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Data Server (DSS2)
node-b
IP Address:192.168.0.221

5. Create new target on the node-b

Next, select **target1** within the **Targets** field.

To assign appropriate volume to the target (**iqn.2012-09:mirror-1->lv0001**) and click the **+** button located under **Action.**

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| SETUP | CONFIGURATION | MAINTENANCE | STATUS | HELP |

You are here: Configuration ▶ iSCSI target manager ▶ Targets ▶ iqn.2012-09:mirror-1 (target1)

Targets
- target0
- target1

Target volume manager

Info
Currently there are no LUN's added to this target. In order to add a LUN, click on the plus "+" sign in the "Action" column for this LUN.

Info
Please note that in order to access iSCSI-enabled data from an initiator, the target needs to have a LUN 0, otherwise the data in all other LUNs will be inaccessible. The data will also be inaccessible if you select an inactive snapshot or a destination volume (volume replication) as LUN 0.

Volume	SCSI ID	LUN	RO	WB	Action
lv0001	iZGxwlh33QBSpRdN	0	☐	☐	+ −

CHAP users

CHAP user access authentication
- ⊙ No CHAP user access authentication
- ○ Enable CHAP user access authentication

apply

⭐ Event Viewer

NOTE:
Both systems must have the same SCSI ID and LUN#

WARNING:
Please do not switch on the write back (WB) cache !

Open-E DSS V7 Active-Active iSCSI Failover

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Data Server (DSS1)
node-a
IP Address:192.168.0.220

5. Create new target on the node-a

On the node-a, choose **CONFIGURATION**, „iSCSI target manager" and „Targets" from the top menu.

Within the **Create new target** function, uncheck the box **Target Default Name.**
In the **Name** field, enter a name for the new target and click **apply** to confirm.

iSCSI targets

NOTE:
Both systems must have the same Target name.

Data Server (DSS1)
node-a
IP Address:192.168.0.220

5. Create new target on the node-a

Next, you must set the 2nd target.
In the **Create new target** function,
uncheck the box **Target Default
Name**.
In the Name field, enter a name for
the 2nd new target and click **apply**
to confirm.

iSCSI targets

NOTE:
Both systems must have the same Target name.

Data Server (DSS1)
node-a
IP Address:192.168.0.220

5. Create new target on the node-a

Select the **target0** within the **Targets** field.

To assign appropriate volume to the target (**iqn.2012-09:mirror-0 -> lv0000**) and click the ➕ button located under **Action.**

NOTE:
Before clicking the ➕ button again, please copy & paste the SCSI ID and LUN# from the node-b.

WARNING:
Please do not switch on the write back cache (WB) !

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

5. Create new target on the node-a

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SETUP   CONFIGURATION   MAINTENANCE   STATUS   HELP

You are here: Configuration ▸ iSCSI target manager ▸ Targets ▸ iqn.2012-09:mirror-1 (target1)

Targets

- ● target0
- ● target1

Target volume manager

ℹ️ **Info**

There are logical volumes selected as mirror destination. There is no direct access to mirror destination volume. In order to access such volume, you can stop mirror task and switch destination mode to source mode or create a snapshot on the destination volume and assign the snapshot to a new target.

ℹ️ **Info**

Please note that in order to access iSCSI-enabled data from an initiator, the target needs to have a LUN 0, otherwise the data in all other LUNs will be inaccessible. The data will also be inaccessible if you select an inactive snapshot or a destination volume (volume replication) as LUN 0.

Volume	SCSI ID	LUN	RO	WB	Action
lv0001	iZGxwlh33QBSpRdN	0	☐	☐	+ −

CHAP users

CHAP user access authentication

⦿ No CHAP user access authentication

○ Enable CHAP user access authentication

apply

★ Event Viewer

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Select the **target1** within the **Targets** field.

To assign appropriate volume to the target (**iqn.2012-09:mirror-1**-> **lv0001**) and click the + button located under **Action.**

NOTE:
Before clicking the + button again, please copy & paste the SCSI ID and LUN# from the node-b.

WARNING:
Please do not switch on the write back cache (WB) !

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

On the node-a, go to **SETUP** and select „**Failover**".

In the **Auxiliary paths** function, select the 1st **New auxiliary path** on the local and remote node and click the **add new auxiliary path** button.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

In the **Auxiliary paths** function, select the 2nd **New auxiliary path** on the local and remote node and click the add new auxiliary path button.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

In the **Ping nodes** function, enter two ping nodes.
In the **IP address** field enter IP address and click the **add new ping node** button (according to the configuration in the third slide).
In this example, IP address of the first ping node is: 192.168.1.107 and the second ping node: 192.168.2.107

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

Next, go to the **Resources Pool Manager** function (on node-a resources) and click the **add virtual IP** button. After that, enter **Virtual IP,** (in this example 192.168.21.100 according to the configuration in the third slide) and select two appropriate interfaces on local and remote nodes. Then, click the **add** button.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

Now, still on node-a resources (local node) enter the next Virtual IP address. Click **add virtual IP** enter **Virtual IP,** (in this example 192.168.31.100), and select two appropriate interfaces on the local and remote nodes. Then, click the **add** button.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

Then, go to node-b resources and click the **add virtual IP** button again and enter the **Virtual IP (**In this example 192.168.22.100 according to the configuration in the third slide) and select two appropriate interfaces on the local and remote nodes. Then, click the **add** button.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

Now, still on node-b resources, click the **add virtual IP** button and enter the next **Virtual IP,** (in this example 192.168.32.100, according to the configuration in the third slide) and select two appropriate interfaces on the local and remote nodes. Then, click the **add** button.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

Now you have 4 **Virtual IP** addresses configured on two interfaces.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

When you are finished with setting the virtual IP, go to the **iSCSI resources** tab on the **local node resources** and click the **add or remove targets** button.
After moving the target **mirror-0** from **Available targets** to **Targets already in cluster**, click the **apply** button.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

Next, go to the **iSCSI resources** tab on the **remote node r**esources and click the **add or remove targets** button.
After moving the target **mirror-1** from **Available targets** to **Targets already in cluster** , click the **apply** button.

Data Server (DSS1)
node-a
IP Address:192.168.0.220

6. Configure Failover

After that, scroll to the top of the **Failover manager** function.
At this point, both nodes are ready to start the Failover.
In order to run the Failover service, click the **start** button and confirm this action by clicking the **start** button again.

NOTE:
If the start button is grayed out, the setup has not been completed.

Open-E DSS V7 Active-Active iSCSI Failover
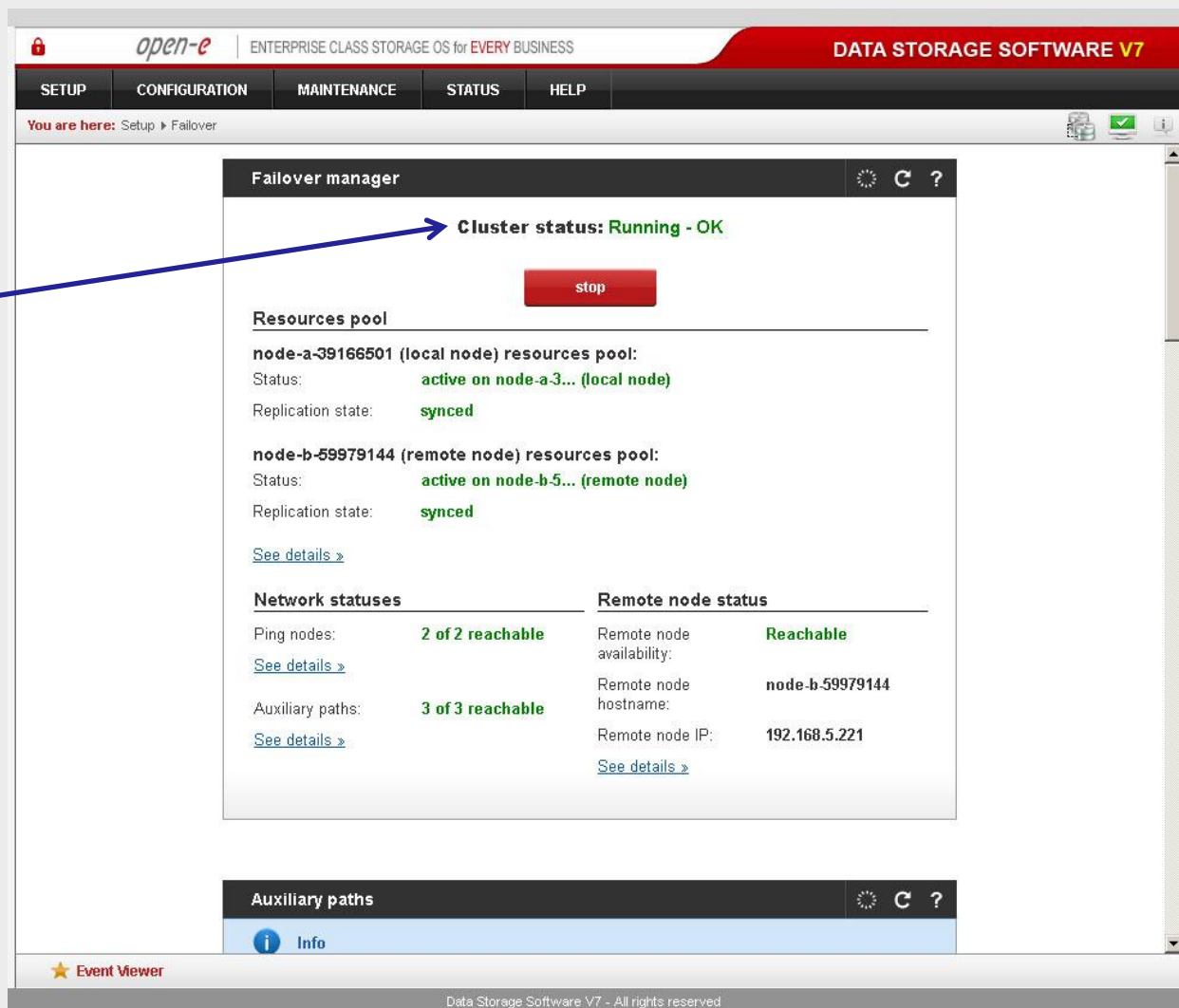
Data Server (DSS1)
node-a
IP Address:192.168.0.220

7. Start Failover Service

After clicking the **start** button, configuration of both nodes is complete.

NOTE:

You can now connect with iSCSI Initiators. The first storage client, in order to connect to target0 please setup multipath with following IP on the initiator side: 192.168.21.101 and 192.168.31.101. In order to connect to target1 please setup multipath with following IP on the initiator side: 192.168.22.101 and 192.168.32.101.

For the next storage client please setup multipath accordingly: for access to target: 192.168.21.102, 192.168.31.102 and for access to target1: 192.168.22.102, 192.168.32.102.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

8. Test Failover Function

In order to test Failover,
go to the **Resources pool manager** function.
Then, in the **local node** resources, click on the **move to remote node** button and confirm this action by clicking the **move** button.
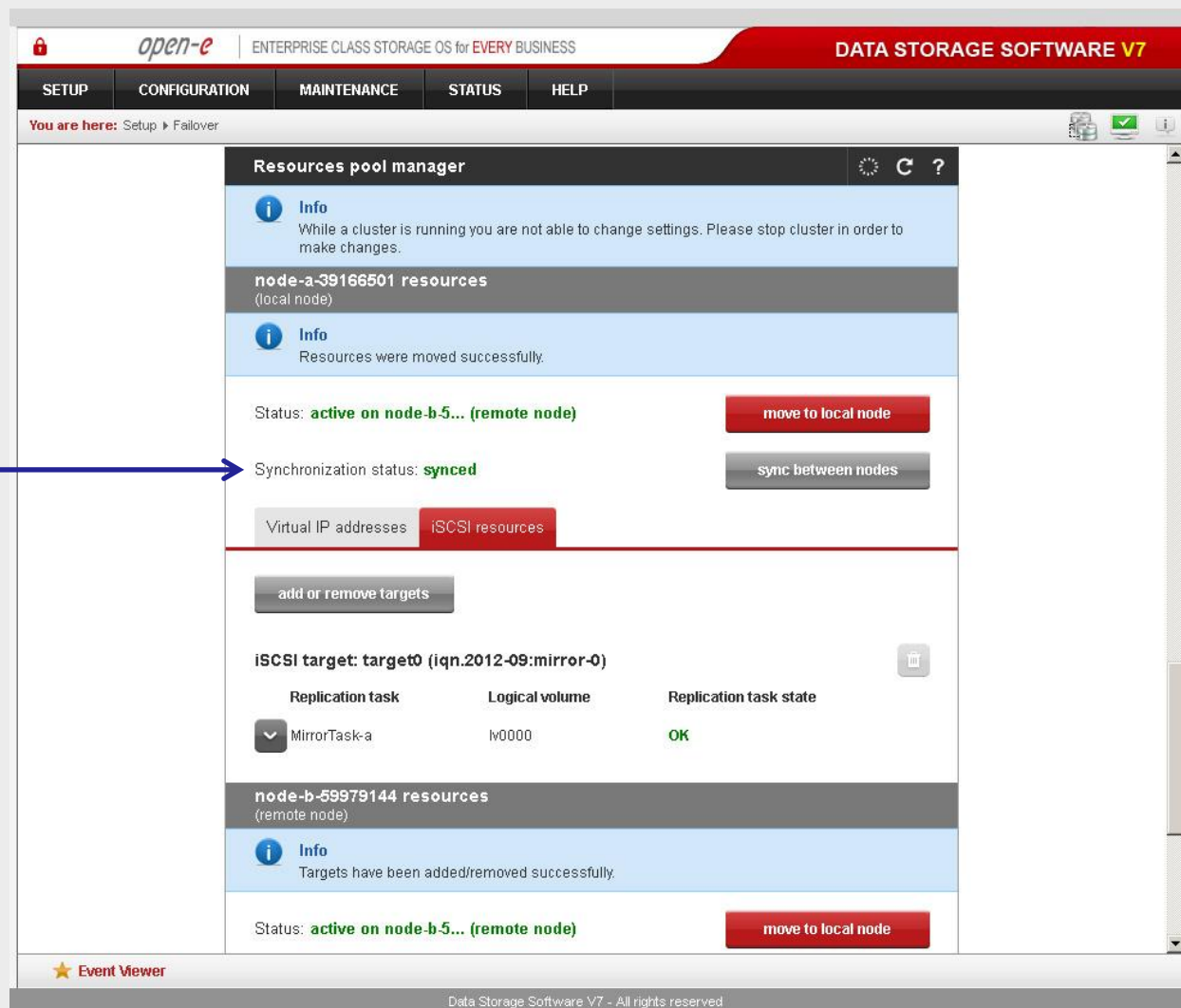
Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

8. Test Failover Function

After performing this step, the status for **local node** resources should state „active on node-b (**remote node**)" and the **Synchronization status** should state „**synced**".

Open-E DSS V7 Active-Active iSCSI Failover

open-e

Data Server (DSS1)
node-a
IP Address:192.168.0.220

9. Run Failback Function

In order to test failback, click the **move to local node** button in the **Resources pool manager** box for local node resources and confirm this action by clicking the **move** button.

Open-E DSS V7 Active-Active iSCSI Failover

Data Server (DSS1)
node-a
IP Address:192.168.0.220

9. Run Failback Function

After completing this step, the status for node-a resources should state „active on node-a (**local node**)" and the **Synchronization status** should state „**synced**". Then, you can apply the same actions for **node-b resources.**

NOTE:
The Active-Active option allows configuring resource pools on both nodes and makes it possible to run some active volumes on node-a and other active volumes on node-b. The Active-Active option is enabled with the TRIAL mode for 60 days or when purchasing the Active-Active Failover Feature Pack. The Active-Passive option allows configuring a resource pool only on one of the nodes. In such a case, all volumes are active on a single node only.

The configuration and testing of Active-Active iSCSI Failover is now complete.

Thank you!

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